IB Math Studies Internal Assessment packet **P1**

General Information Fall 2017

**Description**

This project is an application of the statistics and math you study this trimester and could possibly connect to math topics from your past if you choose. The project involves the collection and/generation of *Information* and the analysis of that data. It is an individual project and will be your original work.

**Each project must contain:**

1. An ***Introduction*** which communicates your idea (*called a "Statement of the Task"*) and a description of the plan to carry out your project. In a way, this is the hardest part of the project, because you have to do a lot of “ahead thinking”.
2. A ***Mathematical analysis*** of information on your data with appropriate interpretations.

There must be obtainable data that relates to your research question and project. The data must be raw data, not data that has already been summarized into tables or graphs.

These measurements, information or data need to be collected and/or generated by you. You can collect either:

Secondary Data (data collected by someone else)

* + - Obtain information from published tables or records, such as timetables, temperature records, crime rates, pollution data, Olympic records, etc.
    - Search the internet or refer to reputable sources that publish statistical data. (must provide references)

Primary Data (information that you personally collect)

* + - Create surveys or questionnaires to generate your own data.
    - Observational Data --- by observing or measuring using a whole range of measuring instruments such as rulers, tape measures, compasses, protractors, or electronic devices. You can also carry out experiments to generate data (as long as it is not part of another class).

You can also create a project that uses a combination of both primary and secondary data.

You can choose from a wide variety of project types. For example: you can compare multiple variables and/or features of these variables using 1-variable statistics and displays, study of scatter plots and correlation between numerical variables, study of scatter plots and equation modeling to make predictions, study of relationships between categorical variables, other investigations that interest you using applications, statistical surveys, etc. *Historical projects that reiterate facts but have little mathematical content are not appropriate.*

**You should choose a project with a theme or topic in which you have a true interest.** You are required to make use of mathematics in the IB Math Studies Curriculum (and South Geometry/ Algebra 2 curriculum).

**Scoring**

Your project will be scored using the official IB A*ssessment Criteria.* *For those of you taking the IB Math Studies Exam, this project will count as 20% of your overall IB Math Studies Score. The other 80% comes from the IB exam in May.* Earning a score of 17 or higher out of 20 on the project would earn you a “7” toward the total Math Studies score (15 or 16 would earn a "6", etc). *Just so you know, IB students who do not turn in a project may not take the IB Math Studies Exam.*

**Effect on Your Grade in this class:**

During this trimester, you will get your project off and rolling. You will create the introduction to your project, collect your data, and start the first few phases of your project. You will turn in two drafts, both of which will be assessed and will contribute to the "Test and Project" category this trimester.

Some of you will finish your entire project (final draft) by the end of this trimester or before winter break. However, you will have the option of turning in the final draft by January 8.

We will spend a few hours in class preparing for this project, but most of the work will be done by you outside of class. (IB estimates it should take about 25 hours total for a high level (7) project which includes class time).

Any student taking the IB Math Studies Exam this year, or next year if you are a sophomore, need to start and finish a project by January 8.

**Length**

The maximum word count is 2,000 words, *excluding diagrams, graphs, appendices, and bibliography.* However, it is the *quality* of the mathematics and the processes used and described that is most important, rather than the number of words written.

**Assessment Criteria**

Each project will be assessed against the following criteria:

Criterion A Introduction …………………………………… 3 pts

Criterion B Information/Measurement …………. 3 pts

Criterion C Mathematical processes ………………. 5 pts

Criterion D Interpretation of results …………….. 3 pts

Criterion E Validity ……………………………………………… 1 pts

Criterion F Structure and Communication ……… 3 pts

Criterion G Notation & Terminology…………………. 2 pts

We will spend class time familiarizing ourselves with the criteria. Make a genuine effort to get to know it well.

*For those taking the IB Math Studies exam in May: The project will be assessed by myself, in collaboration with other 4j teachers of IB Math Studies, for your initial IB grade and moderated by the IBO at a later time. The final grade will be determined by the IBO and will be available on-line for you to see on July 1st along with your exam results.*

**The Hardest Part......**

is getting started. Choosing your own theme & topic and creating a clear project focus will be the hardest part for many of you. I will say that, based on past students**,** you will enjoy the experience a lot more if you choose a topic of genuine personal interest.

**Schedule for the Project:**

***September/October*** *-Get to know the Assessment Criteria, in class.*

*-Look at sample projects. Grade sample projects, in class.*

*-Investigate your own interests / develop possible topics*

***by Mid October*** *-Decide on your project topic and details.*

*-Write up your Introduction, (a.k.a. Statement of Task "S.O.T")*

***Due: Oct 24th*****Turn in Draft #1** *-* Introduction and Definition of Variables

*submitted via TurnItIn.com*

***by Mid November*** *Receive feedback from me on your introduction*

*Edit your introduction.*

*Collect your data.*

***Due: Nov. 20*****Turn in Draft #2**

*which includes: ++Revised Introduction*

*++Hard copy of your data on a spreadsheet*

*++Description of your Data Collection Process*

*If you are senior, let me know in advance of other IB deadlines like your extended essay. I will be flexible with you as long as you let me know in advance.*

*Before Winter Break:*

*-Perform mathematical processes using your information or data that you either collected or generated. Follow the guidelines and the Project Writing Guide.*

*-Come see me if you have questions or need advice.*

*Turn in your final project before winter break if possible, or during the first week back from break.*

***Final Draft Deadline:*** *January 8, 2018*